



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,950	03/29/2007	Thomas Nissl	047956/307840	7925

37305 7590 10/08/2009

ALSTON & BIRD LLP
BANK OF AMERICA PLAZA
101 SOUTH TRYON STREET
SUITE 4000
CHARLOTTE, NC 28280-4000

EXAMINER

MILLER, CHERYL L

ART UNIT	PAPER NUMBER
----------	--------------

3738

MAIL DATE	DELIVERY MODE
-----------	---------------

10/08/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,950	Applicant(s) NISSL ET AL.	
	Examiner CHERYL MILLER	Art Unit 3738	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/20/2009</u> . | 6) <input checked="" type="checkbox"/> Other: <u>Attachment 1</u> . |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 20, 2009 has been entered.

Response to Arguments

Applicant's arguments with respect to claims 1 and 4-15 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4, and 7-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Mueller et al. (US 2002/0022877 A1, cited previously). Mueller discloses a stent (1) comprising a support frame (see fig.1, 8) that is expandable from an initial state (dotted lines in fig.2) to a support state (solid lines in fig.2) comprising at least two annular segments (8) formed by struts (straight segments) interconnected in a corrugated manner (see fig.1 for example) by transitional

Art Unit: 3738

sections (bends 12, 22 or 10.1, 10.2), adjacent annular segments (8) connected by connectors (20), wherein one annular segment (8) is at a proximal end and another annular segment (8) is at a distal end of the stent (see fig.8; fig.1 discloses end segments 8 are same as others, however not shown in figures, P0048), wherein every other transition section has a widened head end (12) projecting proximally from a proximal end and distally from a distal end (ends not shown, however inherent as the pattern is repeated, end segments 8 are the same without the connectors 20), head (12) having a convex front section (free end surface), convex edge section (side of head 12) and concave throat section (where connected to the linear struts of 10; see figs), the concave throat sections configured to intermesh with and extend at least partially over (*extends higher, more proximally and more distally thus considered "over"*) adjacent transitional sections (22) in the initial state (shown as dotted lines in fig.2), wherein each of the struts are substantially parallel to one another in the initial state (see fig.1 wherein all struts including connectors are shown parallel and aligned with the longitudinal axis of the stent; P0045, P0047). Mueller shows each annular segment to have substantially the same amplitude (*length from one transition segment to another is consistent thus considered the same amplitude*). Deflections elements may be considered eyelet, or opening inside bulbous head end 10.1. Mueller shows connectors (20) to extend from a ridge of an annular segment (8) to a transitional segment (12 or 22) of an adjacent annular segment (8; see figs). Mueller shows connectors (20) aligned. Mueller's widened head ends (12) are shown projecting further axially from the rest of the stent. Mueller shows convex transition sections (22) configured to intermesh with adjacent concave throat sections (see figs). It is noted that "intermesh" does not necessarily require the elements to *touch or contact* one another, they just need have similar contours. If applicant were to claim

Art Unit: 3738

throat sections to intermesh with so as to extend at least partially over and abut (or in abutment with) adjacent transitional sections in the initial state, this would seemingly overcome Mueller.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5-8, 11-14, and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pollock et al. (US 6,942,690 B1). Pollock discloses a stent (see figs.1, 2, 6 for example) comprising a support frame (see fig.1, 2, or 6) that is expandable from an initial state (fig.2) to a support state (fig.1 or alternately fig.6) comprising at least two annular segments (see attachment 1) formed by struts (straight segments in fig.2) interconnected in a corrugated manner by transitional sections (bends/peaks valleys), adjacent annular segments connected by connectors (see attachment 1), wherein one annular segment is at a proximal end and another annular segment is at a distal end of the stent, wherein all struts are parallel in the initial state (see fig.2) and have the same amplitude (see fig.2). Pollock discloses the stent substantially as claimed, however does not shown widened convex and concave head ends on the stent of figs.1, 2, and 6. Pollock does teach however using widened convex and concave intermeshing head ends on stent ends (see fig.22a, 22b) for the purpose of increasing the surface area of the stent on the vessel reducing trauma to the patient (col.11 line 65-col.12 line 40). It would have been obvious to one having ordinary skill in the art at the time the invention was made to combine Pollock's convex and concave head end teaching for the ends of stents (col.12, lines 38-40) with

Art Unit: 3738

the previous stent design of Pollock in figs.1, 2 or 6, in order to provide a stent with increased surface area at the ends, reducing trauma to the patient). Pollock's head ends (122) in fig.22a are shown to have the shape claimed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHERYL MILLER whose telephone number is (571)272-4755. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Corrine McDermott can be reached at 571-272-4754. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cheryl Miller/
Examiner, Art Unit 3738

/Corrine M McDermott/
Supervisory Patent Examiner, Art Unit 3738